

What is claimed is:

1. A light-absorptive antireflection filter allowing light incident from a first surface side to pass at a predetermined transmittance and

attenuating reflected light of the incident light from a second surface side by interference of light at an antireflection multilayer film,

said light-absorptive antireflection filter comprising:

a light-absorptive film formed on the first surface and containing pigment microparticles;

the antireflection multilayer film formed on the second surface and contacting the light-absorptive film; and

at least one electroconductive thin film included in the antireflection multilayer film.

2. A light-absorptive antireflection filter as set forth in claim 1, wherein a physical thickness of the light-absorptive film is at least about a size of the pigment microparticles and set within a range wherein a quality of the light-absorptive film becomes uniform.

3. A light-absorptive antireflection filter as set forth in claim 2, wherein the physical thickness of the light-absorptive film is about not less than 10 nm and not more than 1000 nm.

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4. A light-absorptive antireflection filter as set forth in claim 3, wherein the physical thickness of the light-absorptive film is about not less than 100 nm and not more than 800 nm.

5 5. A light-absorptive antireflection filter as set forth in claim 2, wherein the physical thickness of the light-absorptive film is at least about a secondary size of aggregates of the pigment microparticles.

10 6. A light-absorptive antireflection filter as set forth in claim 3, wherein the light-absorptive film contains microparticles of an organic pigment.

7. A light-absorptive antireflection filter as set forth in claim 3, wherein the light-absorptive film contains microparticles of an inorganic pigment.

15 8. A light-absorptive antireflection filter as set forth in claim 1, wherein a surface resistance of the electroconductive thin film is about not less than 50 Ω/\square and not more than 1000 Ω/\square .

20 9. A light-absorptive antireflection filter as set forth in claim 1, wherein the predetermined transmittance is controlled by selecting the type of the pigment microparticles and the ratio of blending it.

25 10. A light-absorptive antireflection filter as set forth in claim 9, wherein the predetermined transmittance is about not less than 40 percent and not more than 95

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percent with respect to light of a wavelength between 450 nm to 650 nm.

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5 11. A light-absorptive antireflection filter as set forth in claim 1, wherein a reflectance at an interface of the light-absorptive film and the antireflection multilayer film with respect to light incident from the first surface side, defined as a first reflectance, is set within a range wherein reflected light of the light incident from the first surface side at the interface does not form a ghost image visually discernable from the light incident from the first surface side at the first surface.

10 12. A light-absorptive antireflection filter as set forth in claim 11, wherein the first reflectance is about not less than 0.1 percent and not more than 10 percent.

15 13. A light-absorptive antireflection filter as set forth in claim 12, wherein the first reflectance is not more than about 5 percent.

20 14. A light-absorptive antireflection filter as set forth in claim 11, wherein a reflectance at the interface of the light-absorptive film and the antireflection multilayer film with respect to light incident from a second surface side, defined as a second reflectance, is set within a range wherein reflected light of the incident light from the second surface side at the

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of the second surface.

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forth in claim 20, wherein a refractive index of the magnesium fluoride film is not more than about 1.52 and a physical thickness of the magnesium fluoride film is about 70 to 110 nm.

5 22. A light-absorptive antireflection filter as set forth in claim 15, wherein a refractive index of the light-absorptive film is about not less than 1.40 and not more than 1.65.

10 23. A light-absorptive antireflection filter as set forth in claim 22, wherein the refractive index of the light-absorptive film is about not less than 1.45 and not more than 1.55.

15 24. A light-absorptive antireflection filter as set forth in claim 1, wherein the antireflection multilayer film includes a PVD (physical vapor deposition) film.

25 25. A light-absorptive antireflection filter as set forth in claim 24, wherein the antireflection multilayer film includes a sputtering film.

20 26. A display device comprising:

a display unit displaying an image and

a light-absorptive antireflection multilayer film formed on the display unit, allowing light incident from a first surface side of the display unit side to pass at a predetermined transmittance, and attenuating reflected light of the incident light from a second

surface side;

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said light-absorptive antireflection multilayer
film comprising

5 a light-absorptive film formed on the first
surface and containing pigment microparticles,

an antireflection multilayer film formed on the
second surface and contacting the light-absorptive film,
and

10 at least one electroconductive thin film
included in the antireflection multilayer film.

27. A display device as set forth in claim 26,
wherein a surface of the display unit is substantially
flat.

15 28. A method of producing a light-absorptive
antireflection film comprising the steps of:

coating a solution containing pigment
microparticles and a solvent;

20 drying off the solvent to form a light-
absorptive film containing the pigment microparticles and
having a predetermined transmittance; and

forming by physical vapor deposition (PVD) on
the light-absorptive film an antireflection multilayer
film including at least one electroconductive thin film
and attenuating reflected light of the incident light by
25 interference of light.

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29. A method of producing a light-absorptive antireflection film as set forth in claim 28, wherein the PVD method comprises a sputtering method.

5 30. A method of producing a display device comprising the steps of:

coating on a display unit displaying an image a solution containing pigment microparticles and a solvent;

10 drying off the solvent to form a light-absorptive film containing the pigment microparticles and having a predetermined transmittance; and

15 forming by physical vapor deposition (PVD) on the light-absorptive film an antireflection multilayer film including at least one electroconductive thin film and attenuating reflected light of the incident light by interference of light.

31. A method of producing a display device as set forth in claim 30, wherein the PVD method comprises a sputtering method.
